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EXAMINER

NASH, LASHANYA RENEE

ART UNIT PAPER NUMBER

2153

DATE MAILED: 06/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/919,729

Applicant(s)

MATSUBAYASHI ET AL.

Examiner

LaShanya R. Nash

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 April 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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DETAILED ACTION

This action is in response to an Amendment filed April 12, 2005. Claims 1-28 are presented for further consideration.

Response to Arguments

Claim objections, see Remarks, with respect to claims 2-12, and 15-22 are withdrawn.

Applicant's arguments, see Remarks, with respect to the rejections of claims 1-3, 9-10, 13, and 26-28 under 35 USC 102 (e) and claims 4-8, 11-12, and 14-25 under 35 USC 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, new grounds of rejections are made in view of newly applied reference DeSimone et al. (US Patent 5,905,872), as set forth below in the office action.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, and 9-10 and 26-28 are rejected under 35 U.S.C. 103(a) as being unpatentable Achenson et al. (US Patent 6,477,586), in view of DeSimone et al. (US Patent 5,905,872), hereinafter referred to as Achenson and DeSimone respectively.

In reference to claim 1, Achenson discloses a method for transmission of messages (i.e. remote procedure calls) between multi-threaded processes within a networking system, without each thread requiring an independent communications channel (column 1, lines 4-7 and column 2, lines 1-8; and column 3, lines 22-32). Achenson explicitly discloses:

- In a network, a method of using a messaging component (i.e. remote procedure call function), which has a network address (i.e. implemented in TCP/IP network processor; column 1, lines 10-50) and a single network communication channel for sending and receiving messages by a plurality of threads execution executing on a network computer which communicates to another computer, (column 2, lines 10-39; column 3, lines 22-46; column 4, line 67 to column 5, line 25; and column 1, lines 1-10) the method comprising:
- Establishing on the network computer, a network communication channel for use by the messaging component, the network connection having a network address, (column 2, lines 23-27; column 3, lines 33-42; column 6, lines 20-26; column 5, line 64 to column 6, line 2; and column 6, lines 57-58);
- Supplying registration information (i.e. queue id) associated with each of the plurality of execution threads executing on the network computer, (column 5, lines 48-55 and column 6, lines 27-32);

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- Receiving a message at the network computer by the messaging component, the message containing the network address of the messaging component, the message payload portion (I.e. hqueue) for identifying one or more of the execution threads, (column 6, lines 32-41; column 1, lines 34-42; column 7, line 67 to column 8, line 2; and column 6, lines 42-47);
- The messaging component comparing the contents of the payload portion with the registration information for each of the plurality of execution threads; and forwarding the received message to the one or more execution threads based in the results of the comparison, (column 5, lines 55-63; column 3, lines 63-65; column 6, line 50 to column 7, line 9; and column 3, line 43-56).

However, Achenson does not disclose: wherein the received message is used to select a manner of data transfer, which includes selection of a direct transfer using a direct connection between the network computer and the other computer, or a referential transfer to the network computer from a network server using a reference to the network server supplied by the other network computer.

Nonetheless, these would have been obvious modifications for one of ordinary skill in the art to the aforementioned method, as further evidenced by DeSimone.

In an analogous art, DeSimone discloses a method for establishing alternative manners of transfer (i.e. direct connection; reference connection) for access to remote applications via a network, (abstract). DeSimone further discloses the method: wherein the received message (i.e. connection management information transferred by means of messages; column 1, lines 64-67) is used to select a manner of data transfer, which includes selection of a

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direct transfer using a direct connection between the network computer (i.e. client; Figure 1-item 101) and the other computer (i.e. server; Figure 1-item 104), (column 3, lines 1-46); or a referential transfer to the network computer (i.e. client; Figure 2-item 201) from a network server (i.e. proxy server; Figure 2-item 203; column 3, lines 37-43) using a reference (i.e. response; Figure 2-item 212) to the network server supplied by the other network computer (i.e. server; Figure 2-item 206), (column 3, line 54 to column 4, line 5). One of ordinary skill in the art would have been motivated to implement this in the method as disclosed by Achenson, so as to establish alternative manners of transfer thereby reducing delay and/or loss of data caused by transmission between two endpoints, (DeSimone column 1, lines 1-32).

In reference to claim 2, Achenson explicitly shows the limitations, (column 4, line 66 to column 5, line 47 and Figure 2).

In reference to claim 3, Achenson explicitly shows the limitations, (column 6, lines 42-47).

In reference to claim 9, Achenson explicitly shows the limitations, (column 5, lines 19-33; column 5, lines 55-63; and column 2, lines 14-32, and column 1, lines 15).

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In reference to claim 10, Achenson explicitly shows the limitations, (column 7, line 67 to column 8, line 2).

In reference to claims 26-28, Achenson explicitly shows the limitations, (column 2, lines 14-32; column 1, lines 10-16; column 12, lines 65 and column 1, lines 38-50).

Claims 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Metz et al. (US Patent 5,978,855) in view of DeSimone et al. (US Patent 5,905,872), hereinafter referred to as Metz and DeSimone respectively.

In reference to claim 13, Metz discloses a method for downloading application software and transmitting messages through one channel of a digital broadcast network in order to decrease bandwidth usage, (column 5, lines 14-35; column 6, lines 27-36; and Figure 1). Metz explicitly discloses:

- A method of communicating between a set-box top (Figure 1-item 100) and a cable head end (Figure 1-item 11) via a digital cable network (Figure 1-item 15), (column 5, lines 25-36; column 7, lines 35-48; and column 8, line 44 to column 9, line 29) the method comprising:
- Establishing a common network communication channel on one or other the set-box top and the cable head end, wherein the common network communication channel is shared by a plurality of applications, or execution sub process thereof, to send and receive messages via the digital network, (column 9, lines 10-20 and column 9, lines 43-67); and wherein

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- Controlling the plurality of applications or execution sub processes to select a manner of transfer (i.e. selectively transmits broadcasts video programming through a first one of the plurality of broadcasts channels and software through a second channel; column 5, lines 14-36), wherein one of the set-box top and the cable head end is a recipient and one is a transferor, (i.e. source system to recipient; column 9, lines 9-45).

However, Metz does not disclose the method: wherein selection of the manner of transfer includes selection of a direct transfer using a direct connection between the transferor and the recipient, or a referential transfer to the recipient from a network server using a reference to the network server supplied by the transferor. Nonetheless, these would have been obvious modifications for one of ordinary skill in the art to the aforementioned method, as further evidenced by DeSimone.

In an analogous art, DeSimone discloses a method for establishing alternative manners of transfer (i.e. direct connection; reference connection) for access to remote applications via a network, (abstract). DeSimone further discloses the method: wherein the received message (i.e. connection management information transferred by means of messages; column 1, lines 64-67) is used to select a manner of data transfer, which includes selection of a direct transfer using a direct connection between the recipient (i.e. client; Figure 1-item 101) and the transferor (i.e. server; Figure 1-item 104), (column 3, lines 1-46); or a referential transfer to the recipient (i.e. client; Figure 2-item 201) from a network server (i.e. proxy server; Figure 2-item 203; column 3, lines 37-43) using

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a reference (i.e. response; Figure 2-item 212) to the network server supplied by the transferor (i.e. server; Figure 2-item 206), (column 3, line 54 to column 4, line 5). One of ordinary skill in the art would have been motivated to implement this in the method as disclosed by Metz, so as to establish alternative manners of transfer thereby reducing delay and/or loss of data caused by transmission between two endpoints, (DeSimone column 1, lines 1-32).

Claims 14-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yasrebi (US Patent 6,141,689) and further in view of Chebrolu (US Patent 6,754,714), hereinafter referred to as Yasrebi and Chebrolu, respectively.

In reference to claim 14, Yasrebi discloses a method for allocating available communication links (i.e. ports) for transfer of messages between threads throughout a computer network, (column 4, line 66 to column 5, line 6; and Figure 2):

- In a network computer (Figure 2-item 22) messaging component and a plurality of execution threads (i.e. multi-threading), a method of determining a manner of transferring data to a recipient network computer, the messaging component (i.e. remote procedure call interface) having a network address and configured to receive and send network messages for the plurality of execution threads, (column 7, lines 13-27; column 6, lines 17-25; column 7,

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lines 50-62; column 5, lines 2-6; column 10, lines 31-36; column 12, lines 38-41; and Figure 5); and

- Receiving a request from one of the execution threads to transfer data to the recipient network computer, the request including at least one requirement (i.e. arguments) for carrying out the request, (column 7, lines 27-50);
- Based on at least in part on the received requirement, determining a proposed manner of transfer (i.e. hypothetical physical port);
- Transmitting, using the messaging component, a start message (i.e. virtual handle) to the recipient network computer, the start message including the proposed manner of transfer, (column 8, line 54 to column 9, line 10 and column 10, lines 24-30);
- A rejection to the proposed manner of transfer, (column 10, lines 64-67).

However, the reference does not disclose: in response to a rejection of the proposed manner of transfer, determining whether an alternative manner of transfer is available; and responding using the messaging component, to the rejection with an alternative manner of transfer where one is available.

Nonetheless, these would have been obvious modifications for one of ordinary skill in the art to the aforementioned method, as further evidenced by Chebrolu.

In an analogous art, Chebrolu discloses a method for allocating an alternative manner of transfer (i.e. secondary channel) for access through network when the original channel is unavailable, (column 5, lines 63-67; column 6, lines 30-52; and Figure 3-items 104, 112, 114). One of ordinary skill in the art would have been motivated to implement this in the method as disclosed by

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Yasrebi so as to reduce the adverse effect on customer service associated with denied connections due to lack of allocable channel capacity, (Chebrolu column 2, lines 65-67). However, Yasrebi and Chebrolu do not disclose the method: wherein determining the manner of data transfer includes selection of a direct transfer using a direct connection between the network computer and the recipient network computer, or a referential transfer to the network computer from a network server using a reference to the network server supplied by the recipient network computer. Nonetheless, these would have been obvious modifications for one of ordinary skill in the art to the aforementioned method, as further evidenced by DeSimone.

In an analogous art, DeSimone discloses a method for establishing alternative manners of transfer (i.e. direct connection; reference connection) for access to remote applications via a network, (abstract). DeSimone further discloses the method: wherein the received message (i.e. connection management information transferred by means of messages; column 1, lines 64-67) is used to select a manner of data transfer, which includes selection of a direct transfer using a direct connection between the recipient network computer (i.e. client; Figure 1-item 101) and the network computer (i.e. server; Figure 1-item 104), (column 3, lines 1-46); or a referential transfer to the recipient network computer (i.e. client; Figure 2-item 201) from a network server (i.e. proxy server; Figure 2-item 203; column 3, lines 37-43) using a reference (i.e. response; Figure 2-item 212) to the network server supplied by the network computer (i.e. server; Figure 2-item 206), (column 3, line 54 to column 4, line 5). One of ordinary skill in

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the art would have been motivated to implement this in the method as disclosed by Yasrebi and Chebrolu, so as to establish alternative manners of transfer thereby reducing delay and/or loss of data caused by transmission between two endpoints, (DeSimone column 1, lines 1-32).

In reference to claims 15 and 17-18, and 20-22 Yasrebi shows the limitations, (Yasrebi column 10, line 45 to column 11, line 21 and column 12, lines 38-43).

In reference to claim 16, Yasrebi shows the limitations, (Yasrebi column 8, line 66 to column 9, line 25).

In reference to claim 19, Yasrebi shows the limitations, (Yasrebi column 7, lines 28-35).

In reference to claims 23-35 Chebrolu shows the limitations, (Chebrolu column 6, lines 4-10; column 5, lines 53-57; and Figure 2).

Claims 4-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Achenson and DeSimone as previously applied to claim 1 above, and

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further in view of Buehl et al. (US Patent Application Publication 2001/0100059), hereinafter referred to as Buehl.

In reference to claims 4-5, Achenson and DeSimone show substantial features of the claimed method. However the reference fails to show the network is a digital cable network, and the network computer is a set-box top and a cable head end. Nevertheless, this modification would have been obvious to one of ordinary skill in the art at the time of the invention, as further evidenced by Buehl.

In an analogous art, Buehl shows a system for establishing transmission of client request and services in digital cable systems via a single connection (i.e. session), (paragraph [0002], lines 1-4; paragraph [0010], lines 1-20). Buehl shows that communication is supported through a digital cable network (Figure 3-item 165), a set-box top (Figure 3-item 190) and a cable head-end, (Figure 3-item 145), (paragraph [0039], lines 1-5; paragraph [0008], lines 1-10; paragraph [0010], lines 1-10; paragraph [0007], lines 1-12). One of ordinary skill in the art would have been so motivated so as to implement these limitations in the aforementioned method so as to reduce the channel allocation for in real time processing applications, such as cable applications thereby reducing bandwidth, (Achenson column 1, lines 10-19 and column 2, lines 1-5).

In reference to claim 6, Achenson and DeSimone disclose substantial features of the claimed invention, specifically the registration information comprising an identifier for each of the plurality of execution threads, (column 5, lines 48-55). However, the reference fails to show the registration information

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comprises a message interest. Nevertheless, this modification would have been obvious to one of ordinary skill in the art at the time of the invention, as further evidenced by Buehl.

In an analogous art, Buehl shows a system for establishing transmission of client request and services in digital cable systems via a single connection (i.e. session), (paragraph [0002], lines 1-4; paragraph [0010], lines 1-20). Buehl shows the messages (i.e. session request) containing the interest of the intended client service, (paragraph [0026], lines 1-25). One of ordinary skill in the art would have been so motivated so as to implement this limitation in the aforementioned method so as to reduce the channel allocation for in real time processing applications, such as cable applications thereby reducing bandwidth, (Achenson column 1, lines 10-19 and column 2, lines 1-5).

In reference to claim 7-8 Buehl shows the limitations, (Buehl paragraph [0030], lines 1-15 and paragraph [0031], lines 19).

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Achenson and DeSimone as previously applied to claim 1 above, and further in view of Beaser et al. (US Patent 6,697,862), hereinafter referred to as Beaser.

In reference to claim 11, Achenson and DeSimone show substantial features of the claimed method, specifically the network address of the messaging component, (column 1, lines 34-37). However the reference fails to

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show the network address comprises a MAC address. Nonetheless, this would have been an obvious modification for one of ordinary skill in the art at the time of the invention, to the aforementioned method, as further evidenced by Beaser.

In an analogous art, Beaser discloses MAC addressed messaging in a method for networking address maintenance using dynamic host configuration protocol messages in a data-over-cable system, (column 6, lines 38-52 and column 2, lines 27-32). One of ordinary skill in the art would have been motivated to implement this modification into the aforementioned method, so as to improve the maintenance of the network address tables to improve the resource allocation and security in data-over-cable system, (Beaser column 2, lines 56-60).

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Achenson and DeSimone as previously applied to claim 1 above, and further in view of Yoshida (US Patent 6,373,853), hereinafter referred to as Yoshida.

In reference to claim 12, Achenson and DeSimone show substantial features of the claimed method, specifically the network address of the messaging component, (column 1, lines 34-37). However the reference fails to show the network address comprises a Network Access Service Point (NSAP) address. Nonetheless, this would have been an obvious modification for one of ordinary skill in the art at the time of the invention, to the aforementioned method, as further evidenced by Yoshida.

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In an analogous art, Yoshida discloses NSAP address registration employed in a method for dynamic address mapping in which maps ATM addresses and NSAP address with a network, (column 5, line 60 to column 6, line 2 and column 1, line 45-50). One of ordinary skill in the art would have been so motivated to implement this modification into the aforementioned method so as to relieve address information after finishing communication and therefore improving memory use efficiency, (Yoshida column 1, lines 57-64).

Conclusion


THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LaShanya Nash whose telephone number is (571) 272-3957. The examiner can normally be reached on 9am-5pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenton Burgess can be reached on (571) 272-3949. The fax number for the organization where this application or proceeding is assigned is (703) 746-7239. Any inquiry of a general nature relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

LaShanya Nash
Art Unit 2153
June 21, 2005



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